

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) In a communication network comprising at least one information provider server, a plurality of user terminals which receive information from said information provider server and a transfer device for routing information between said information provider server and said user terminals, a billing method performed by said transfer device comprising:

recording at least one network addresses for the information provider server and billing management information for identifying whether the information provider server is billed;

detecting a network address of said information provider server [device designated when said] for an information transmission from said information provider server to said user terminal [receives an information transmission from said information provider server];

determining whether or not said information provider server is to be billed based on the detected network address and said billing management information; and

billing the information provider server which performed the information transmission if said billing management information indicates information provider server billing.

2. (Previously Amended) A billing method as recited in claim 1, wherein said transfer device does not route an information transmission if the information provider server is not billed.

3. (Previously Amended) A billing method as in claim 1, wherein said transfer device bills a user who received the information transmission if the information provider server is not billed.

4. (Currently Amended) In a communication network comprising an information provider server, a plurality of user terminals which receive information from said information provider server and a transfer device for routing information between said information provider server and said user terminals, a billing method performed by said transfer device comprising:

receiving, from said information provider server, billing information other than a network address of the information provider server and information to be delivered to a user terminal; ~~and~~

~~determining~~ determining which party, from at least two parties, to bill for routing the information, wherein determining is based on said billing information; and
billing the party.

5. (Previously Amended) A billing method as in claim 4, wherein said transfer device bills a user who received the information transmission if the information provider server is not billed.

6. (Previously Amended) In a communication network comprising an information provider server, a plurality of user terminals which receive information from said information provider server and a transfer device for routing information between said information provider server and said user terminals, said transfer device comprising a mailbox for mediating push-type information transmission, a billing method performed by said transfer device comprising:

61 receiving, from said information provider server, address information for said mailbox, information to be delivered to a user terminal, and a desired destination of the user terminal;

storing in said mailbox the information to be delivered to the user terminal;
transmitting the information to the desired destination of the user terminal; and
billing the information provider server for push-type transmission services through said mailbox.

7. (Previously Amended) In a communication network comprising an information provider server, a plurality of user terminals which receive information from said information provider server and a transfer device for routing information between said information provider server and said user terminals, said transfer device comprising an information provider server mailbox for mediating push-type information transmission which is billed to the information provider server and a user-billed mailbox for mediating information transmission which is not billed to the information provider server, a billing method performed by said transfer device comprising:

receiving, from said information provider server, address information for said information provider server mailbox and first information to be delivered to a user terminal;

storing the first information to be delivered to the user terminal in the information provider server mailbox;

receiving, from said information provider server, address information for said user-billed mailbox and second information to be delivered to a user terminal;

storing the second information to be delivered to the user terminal in the user-billed mailbox;

billing the information provider server for at least a portion of the first information; and

billing the user for at least a portion of the second information.

8. (Previously Amended) A billing method as in any one of claims 1-7, wherein billing is based on communication services for at least a portion of the information transmitted.

B1 9. (Previously Amended) A billing method as in any one of claims 1-7, wherein billing is based on an information fee for information provided.

10. (Previously Amended) A billing method as in claim 9, wherein said transfer device bills users the information fees if the information provider server is not billed.

11. (Previously Amended) A billing method as in any one of claims 1-7, wherein said server device belongs to a first communication network following a first communication protocol and said plurality of user terminals belong to a second communication network following a second communication protocol different from that of said first communication network; and wherein said transfer device is a gateway for converting between said first and second communication protocols and routing information transmissions.

12. (Previously Amended) a billing method as in claim 11, wherein said second communication network is a local network accommodating specific user terminals; and said first communication network is a global network interconnecting information resources such as said server device assigned identification information for identifying an absolute network address.

13. (Previously Amended) A billing method as in claim 12, wherein said second communication network is a mobile communication network accommodating a plurality of user terminals which are mobile terminals, and

wherein said first communication network is the Internet.

14. (Previously Added) In a communication system comprising a plurality of information provider servers, a plurality of user terminals, and a transfer device for routing information between the information provider servers and the user terminals, a billing method performed by the transfer device comprising:

recording network addresses for the information provider servers and billing management information for identifying which party, from at least two parties, to bill;

receiving a network address of an information provider server, the information provider server providing the information for routing;

determining which party to bill, from the at least two parties, based on the received network address and the billing management information; and

billing the party.

15. (Previously Added) The billing method of claim 14, determining which party to bill comprises:

comparing the received network address with the recorded network addresses to determine if the received network address matches a specific network address; and

if the received network address matches the specific network address, determining which party, from the at least two parties, to bill for routing the information based on the billing management information correlated to the specific network address.

16. (Previously Added) The billing method of claim 14, wherein the network address is a URL.

17. (Previously Added) The billing method of claim 14, wherein receiving a network address comprises receiving the network address when said user terminal receives an information transmission from said information provider server.

18. (Previously Added) The billing method of claim 14, wherein determining which party to bill comprises determining whether to bill the information provider server; and
wherein billing the party comprises billing the information provider server if it is determined to bill the information provider server.

19. (Previously Added) The billing method of claim 18, wherein billing the party comprises billing a user of the user terminal if it is determined not to bill the information provider server.

20. (Previously Added) The billing method of claim 14, wherein determining which party to bill comprises determining whether to bill a user of the user terminal; and
wherein billing the party comprises billing the user if it is determined to bill the user.

21. (Previously Added) The billing method of claim 14, wherein a database correlates network addresses with billing management information; and
wherein recording network addresses for the information provider servers and billing management information comprises registering the network addresses and the billing management information in the database.

22. (Previously Added) The billing method of claim 21, wherein registering is performed by the information provider server.

23. (Previously Added) The billing method of claim 14, wherein routing of information comprises a pull-type information transmission.

24. (Previously Added) The billing method of claim 14, wherein the network address is received from the user terminal.

25. (Previously Added) The billing method of claim 24, wherein receiving the network address comprises receiving a delivery acknowledgment signal from the user terminal.

26. (Previously Added) The billing method of claim 14, wherein routing of information comprises a push-type information transmission.

27. (Previously Added) The billing method of claim 14, wherein the network address is received from the information provider server.

28. (Previously Added) The billing method of claim 14, wherein determining which party to bill is performed after a user terminal sends a notification that data from the information provider server has been received.

29. (Previously Added) The billing method of claim 14, further comprising routing at least a portion of the information from the information provider server to a user terminal.

30. (Previously Added) The billing method of claim 14, wherein determining which party to bill comprises determining whether to bill the information provider server, and further comprising refusing to route the information from the information provider server to a user terminal if it is determined that information provider server is not to be billed.

b1 31. (Previously Added) The billing method of claim 14, wherein billing the party comprises billing the party based on the information routed.

32. (Previously Added) The billing method of claim 31, wherein billing the party comprises billing the party based on content of the information routed.

33. (Previously Added) The billing method of claim 31, wherein billing the party comprises billing the party based on an amount of the information routed.

34. (Previously Added) The billing method of claim 14, wherein billing the party comprises billing the party based on communication services for routing the information.

35. (Previously Added) The billing method of claim 34, wherein the billing management information further comprises type of billing; and wherein billing the party comprises billing the party based on the type of billing.

36. (Previously Added) The billing method of claim 34, wherein the type of billing comprise amount-dependent or fixed-rate.

37. (Previously Added) The billing method of claim 14, wherein the information provider server is in a first communication network following a first communication protocol, wherein the plurality of user terminals is in a second communication network following a second communication protocol, and wherein the transfer device is a gateway converting between the first and second communication protocols.

38. (Previously Added) The billing method of claim 37, wherein the first communication network comprises an Internet, wherein the second communication network comprises a mobile communication network, and wherein the plurality of user terminals comprise mobile terminals.

b1 39. (Previously Added) In a communication system comprising an information provider server, a plurality of user terminals, and a transfer device for routing information between the information provider server and the user terminals, a billing method performed by the transfer device comprising:
receiving a communication from the information provider server, the communication comprising information to be routed and billing information, wherein the billing information is other than a network address for the information provider server;
determining which party, from at least two parties, to bill for routing the information, wherein determining is based on the billing information; and
billing the party.

40. (Previously Added) The billing method of claim 39, wherein the communication comprises HTML data, and wherein the billing information comprises a tag to the HTML data.

41. (Previously Added) The billing method of claim 39, wherein the billing information comprises an address within the transfer device.

42. (Previously Added) The billing method of claim 41, wherein the address for the transfer device comprises an address for a mailbox accessible by the transfer device, the mailbox for mediating push-type information transmission, and

further comprising storing the information to be routed in the mailbox accessible by the transfer device.

43. (Previously Added) The billing method of claim 42, wherein the information provider is billed for the information stored in the mailbox.

44. (Previously Added) In a communication system comprising an information provider server, a plurality of user terminals, and a transfer device for routing information between the information provider server and the user terminals, a method for operating the information provider server comprising:

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sending network address and billing information from the information provider server to the transfer device for registration of the information provider server with the transfer device, wherein the billing information identifies which party is to be billed for routing information from the information provider server.

45. (Previously Added) The method for operating the information provider server of claim 44, wherein the network address is a URL.

46. (Previously Added) The method for operating the information provider server of claim 44, wherein the billing information further comprises type of billing.

47. (Previously Added) The method for operating the information provider server of claim 46, wherein the type of billing comprises amount-dependent or fixed-rate.

48. (Previously Added) In a communication system comprising an information provider server, a plurality of user terminals, and a transfer device for routing information between the information provider server and the user terminals, a method for providing billing information from the information provider server comprising:

sending a communication from the information provider server, the communication comprising information to be routed and billing information, wherein the billing information is other than a network address for the information provider server.

49. (Previously Added) The method for providing billing information of claim 48, wherein the communication comprises HTML data, and
wherein the billing information comprises a tag to the HTML data.

50. (Previously Added) The method for providing billing information of claim 48, wherein the billing information comprises an address within the transfer device.

51. (Previously Added) The method for providing billing information of claim 50, wherein the address for the transfer device comprises an address for a mailbox accessible by the transfer device, the mailbox for mediating push-type information transmission.

52. (Previously Added) A transfer device for routing information from an information provider server to a plurality of user terminals, the transfer device comprising:

programming code in said transfer device for:

b/ registering network addresses for the information provider servers and
billing management information for identifying which party, from at least two parties, to bill;

receiving a network address of an information provider server, the
information provider server providing the information for routing;

determining which party to bill, from the at least two parties, based on the
registered network address and the billing management information; and
billing the party.

53. (Previously Added) The transfer device of claim 52, wherein the programming code for determining which party to bill comprises:

code for comparing the received network address with the recorded network
addresses to determine if the received network address matches a specific network address; and

if the received network address matches the specific network address, code for
determining which party, from the at least two parties, to bill for routing the information based
on the billing management information correlated to the specific network address.

54. (Previously Added) The transfer device of claim 52, wherein the programming code for determining which party to bill is executed after a user terminal receives an information transmission from the information provider server.

55. (Previously Added) The transfer device of claim 52, wherein programming code for registering the network addresses and the billing management information comprises correlating the network addresses with the billing management information in a database.

56. (Previously Added) The transfer device of claim 52, wherein programming code for determining which party to bill comprises determining whether to bill the information provider server, and

further comprising programming code for refusing to route the information from the information provider server to a user terminal if it is determined that information provider server is not to be billed.

B1 57. (Currently Amended) A transfer device for routing information from an information provider server to a plurality of user terminals, the transfer device comprising:

a database;

an information managing portion for storing registration information for the user terminals and the information provider server in the database;

a billing [managing] management portion, the billing management portion accessing the registration information for the information provider server to determine whether to bill the information provider server and what type of billing to apply;

a billing system in communication with the billing management portion, the billing system calculating the bill;

~~an~~ the information managing portion comprising at least one mailbox for storing information to be transferred from the information provider server ~~and to~~ the user terminals;

a bus for connecting the information managing portion, billing management portion and the [information managing portion] billing system

58. (Previously Added) The transfer device of claim 57, wherein the billing managing portion calculates a number of packets to be exchanged when transmitting information to a user terminal, and stores the calculated number for the billing system.

59. (Previously Added) The transfer device of claim 57, wherein the information managing portion comprises a plurality of mailboxes for storing information based on a type of mail service.

60. (Previously Added) The transfer device of claim 57, further comprising a system control portion for performing protocol conversion between the information provider server and the user terminals.

61. (Previously Added) The transfer device of claim 60, wherein the information provider server is in an Internet network;
wherein the user terminals are in a mobile packet communication network; and
wherein the system control portion performs protocol conversion between the mobile packet communication network and the Internet.

31 62. (Previously Added) The transfer device of claim 57, further comprising an information provider server for providing information to the user terminals, the information provider server connected to the bus.

63. (Previously Added) A transfer device in a communication network comprising:
registering means for registering network addresses of the information provider server and billing management information for identifying which party, from at least two parties, to bill;

receiving means for receiving a network address of an information provider server, the information provider server providing the information for routing;

determining means for determining which party to bill, from the at least two parties, based on the received network address and the billing management information; and

billing means for billing the party.

64. (Previously Added) The transfer device of claim 63, wherein the registering means comprises means for registering network addresses, party to bill, and type of billing to apply.

65. (Previously Added) The transfer device of claim 63, wherein the determining means comprises:

means for comparing the received network address with the recorded network addresses to determine if the received network address matches a specific network address; and

means for determining which party, from the at least two parties, to bill for routing the information based on the billing management information correlated to the specific network address.

66. (Previously Added) In a communication system comprising an information provider server, a plurality of user terminals, and a transfer device for routing information between the information provider server and the user terminals, the transfer device comprising:

31 receiving means for receiving a communication from the information provider server, the communication comprising information to be routed and billing information, wherein the billing information is other than a network address for the information provider server;

determining means for determining which party, from at least two parties, to bill for routing the information, wherein determining is based on the billing information; and

billing means for billing the party.
